Major Energy Logistics Company Builds New Storage Facility

A new refined products storage facility was constructed to support the additional capacity of a nearby refinery. The latest control and visualization technologies were used to manage deliveries to multiple pipelines safely and efficiently.

Main Objective

A new refined products storage facility was constructed to support the additional capacity of a nearby refinery. The project provided the latest technologies to operate and maintain the new tank farm consisting of nearly 4000 hard-wired I/O points and several Modbus networks of data for tank gauges, gas detectors, Multilin energy devices, and Omni Flow computers.

Customer Results

Wonderware System Platform® 3 was selected for its capabilities to standardize communications, visualization, reporting, and alarming. Allen Bradley ControlLogix was selected for its capabilities to mirror the System Platform® 3 object model with user-defined add-on-instructions. The project has provided the customer with the best technology fit for future expandability and standardization requirements, and all deliverables have been successfully achieved.

Application Description

- The Facility Control System (FCS) ControlLogix interfaces operations with the tank farm instrumentation.
- The Safety Shutdown System (SSS) ControlLogix provides for independent monitoring and shutdowns.
- Both FCS and SSS are redundant ControlLogix processors with ControlNet I/O.
- Due to the large amount of I/O, multiple ControlNet networks were required to interface to the PLCs.
- With hundreds of PLC modules in use, internal diagnostic logic was written to convey detected system problems to the operator stations.
- In addition to the FCS and SSS, several remotely mounted ControlLogix processors were programmed to interface with Modbus networks using Prosoft Technologies modules.
- The tank farm design was analyzed so that a System Platform® 3 object model could be derived.
- The required base-objects were identified, and the desired functionality reviewed and approved for building a library of standard objects.
- The base objects templates were developed, functionality acceptance tested, then organized into project specific equipment groups.
- Once the object and equipment group templates were created in the Galaxy, the project specific instances were created and associated vector graphics placed on InTouch screens.
- Microsoft Terminal Servers were used to allow the use of thin-client ACP operator stations.
- All System Platform® and ControlLogix programming was acceptance tested using simulated I/O prior to delivery.

The MAVERICK Difference

MAVERICK's adherence to our Project Complete™ methodology and our expertise with ControlLogix & System Platform® technologies enabled us to successfully respond to and manage an ongoing series of design changes and clarifications by the engineering firm, which resulted in a system five times larger than originally proposed.

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